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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/587,204
Filing Date: June 05, 2000
Appellant(s): BAHL ET AL.

MAILED

JUL 23 2004

Technology Center 2100

Himanshu S. Amin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 10, 2004.

(1) ***Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

(2) ***Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) ***Status of Claims***

The statement of the status of the claims contained in the brief is correct.

(4) ***Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) ***Summary of Invention***

The summary of invention contained in the brief is correct.

(6) ***Issues***

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-36 and 38-39 stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,412,025	Cheston et al.	6-2002
5,999,530	LeMaire et al.	12-1999
6,412,025	Romohr	1-1997

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-6, 14-18, 22- 34, and 38 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by USPN 6,412,025 issued to Cheston et al.

Regarding claim 1, Cheston et al. teach a system that automates detection and configuration of network parameters, comprising:

a first computer system that communicates with a network (figure 1); and

at least a second computer system that provides network information (col. 4, lines 1-10);

the first computer system queries the network and receives the network information from the at least a second computer system before a network identification has been established for the first computer system, and the first computer configures a network interface based on modifications to at least one stored configuration associated with the received network information (figure 4; col. 3, line 62 – col. 4, line 29; col. 5, lines 20-33).

Regarding claim 2, Cheston et al. teach the system of claim 1 further comprising a storage for storing the at least one configuration utilized to configure the network interface (col. 6, lines 18-24).

Regarding claim 3, Cheston et al. teach the system of claim 1, the first computer system configures the network interface by determining a network identification associated with the network information and matching the at least one configuration with the network identification (figure 4; col. 6, lines 38-52).

Regarding claim 4, Cheston et al. teach the system of claim 1, the at least one configuration is determined from previous network configurations (figure 4; col. 6, lines 38-52).

Regarding claim 5, Cheston et al. teach the system of claim 1, the at least one configuration is determined from previous static configurations (col. 2, lines 51-55).

Regarding claim 6, Cheston et al. teach the system of claim 1, the at least one configuration is determined from previous dynamic configurations (Abstract; col. 2, line 51 – col. 3, line 7).

Regarding claim 14, although Cheston et al. do not explicitly teach the system of claim 1, the first computer system interfaces to the network via at least one Network Interface Card (NIC), in order for a conventional computer system to communicate with other computers, it must inherently possess a network card.

Regarding claim 15, although Cheston et al. do not explicitly teach the system of claim 1 the first computer system further comprises a timer for determining a time to receive the network information, in a conventional computer system, when a query is sent to a network, there exists a timer that specifies a period of time from when the query is sent until it is received. Therefore, this feature is inherent.

Regarding claim 16, although Cheston et al. do no explicitly teach the system of claim 1 the at least a second computer system further comprises a timer for mitigating network traffic, there exists a timer in a conventional computer system that specifies the amount of time from the time a data is transmitted to the time a response is received. If the response is not received within the time period, the session will end in order to prevent the same packet from being sent indefinitely, thus mitigating network traffic.

Regarding claim 17, Cheston et al. teach a method that automates detection and configuration of network parameters, comprising the steps of:

querying a network, the network comprising a plurality of network systems wherein respective network systems include a delay timer with a delay time based on a value of an associated address (figure 4; col. 2, line 51 to col. 3, line 7);

receiving a response from the network (figure 4); and

configuring a network interface before a network identification has been established based upon the response from the network (Abstract).

Although Cheston et al. do not expressly teach a delay timer with a delay time based on a value of an associated address, he teaches configuring network parameter using DHCP. It is well known in the art of computer networking that for every entry in the DHCP, there exists a timer associated with each address. When a query is sent to a network, there exists a delay timer that specifies a period of time from when the query is sent until it is received.

Regarding claim 18, Cheston et al. teach the method of claim 17 further comprising the steps of: determining a network identification associated with the response (col. 2, line 51 – col. 3, line 7); and matching at least one configuration associated with the network identification (figures 5 and 6; col. 5, lines 20-33).

Regarding claim 22, although Cheston et al. do not explicitly teach the system of claim 17 wherein the first computer system further comprises a timer for determining a time to receive the network information, in a conventional computer system, when a query is sent to a network,

there exists a timer that specifies a period of time from when the query is sent until it is received. Therefore, this feature is inherent.

Regarding claim 23, although Cheston et al. do no explicitly teach the system of claim 17 further comprising the step of starting at least one delay timer in order to mitigate network traffic, there exists a timer in a conventional computer system that specifies the amount of time from the time a data is transmitted to the time a response is received. If the response is not received within the time period, the session will end in order to prevent the same packet from being sent indefinitely, thus mitigating network traffic.

Regarding claim 24, this is similar to claim 17 therefore the limitations are rejected under the same rationale.

Regarding claim 25, this is similar to claim 18 therefore the limitations are rejected under the same rationale.

Regarding claim 26, Cheston et al. teach a system that automates detection and configuration of network parameters, comprising:

a first computer system with a network interface (figure 1);

a storage that stores at least one configuration associated with a network (col. 6, lines 18-24); and

at least a second computer system that provides network information to the first computer system (col. 4, lines 1-10); and

a Multiple Internet Protocol Configuration (MIPC) service that matches the at least one configuration with a network identification, associated with the network information, wherein the first computer configures the network interface based on the matched configuration (figure 4; col. 3, line 62 – col. 4, line 29).

Regarding claim 27, although Cheston et al. do not explicitly teach the system of claim 26 the Multiple Internet Protocol Configuration (MIPC) service comprising a set of configuration based on at least one of past network configuration and predetermined configurations, the set utilized to the network identification, Cheston et al. teach a DHCP that performs the same function as that specified in the claimed limitation (col. 3, line 62 – col. 4, line 16).

Regarding claim 28, although Cheston et al. do not explicitly teach the system of claim 26, the network interface is at least one Network Interface Card (NIC), in order for a conventional computer system to communicate with other computer systems, it must inherently possess a NIC.

Regarding claim 29, although Cheston et al. do not explicitly teach the system of claim 28, the NIC is mapped to the at least one configuration by the MIPC service, Cheston et al. teach a DHCP that performs the same function as that specified in the claimed limitation (col. 3, line 62 – col. 4, line 16; col. 5, lines 20-33).

Regarding claim 30, although Cheston et al. do not explicitly teach the system of claim 29, the NIC is mapped via a binary table, in a conventional DHCP table, when a computer starts up, it inherently mark the IP address in the table as being potentially valid for the computer. Therefore, this is similar to it being a binary table.

Regarding claim 31, Cheston et al. teach the system of claim 30, further comprising at least one configuration detector for providing an association between the NIC and the at least one configuration (col. 5, lines 20-33).

Regarding claim 32, Cheston et al. teach the system of claim 31, the configuration detector initiates a network operation by registering the network operation with the MIPC service (col. 3, line 62 – col. 4, line 16; col. 5, lines 20-33).

Regarding claim 33, Cheston et al. teach the system of claim 26, the at least one configuration further comprises at least an Internet Protocol (IP) address, a subnet mask, a gateway, a DHCP server, and a name server (Abstract; col. 2, line 51 to col. 3, line 17).

Regarding claim 34, Cheston et al. teach a system that automates detection and configuration of network parameters, comprising:

a first computer system having a network interface (figure 1);

a storage that stores at least one configuration associated with a network (col. 6, lines 18-24); and

a second computer system that provides network information (col. 4, lines 1-10); and a third computer system without a network identification (figure 3);

wherein the first computer system queries the second computer system via the network interface to receive the network information before a network identification has been established for the first computer system (figure 4; col. 3, line 62 – col. 4, line 29);

the first computer system configures the network interface by determining a network identification associated with the network information and matching the at least one configuration with the network identification (figure 4; col. 3, line 62 – col. 4, line 29); and

the third computer system determines a network configuration via communications from at least one of the first computer system and the second computer system (figure 3).

Regarding claim 38, Cheston et al. teach the system of claim 34, further comprising a router that transmits network configuration information periodically (figures 1 and 3; col. 5, lines 9-43).

Claims 7-11, 35, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston et al. in view of USPN 5,999,530 issued to LeMaire et al.

Regarding claim 7, Cheston et al. teach a computer system sending a query to a network (figure 4), but fail to teach the query being a multicast. LeMaire et al. teach sending a multicast query into a LAN (Abstract). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to query the network by sending a multicast message because

multicast transmits messages to a selected group of recipients, therefore allowing only those that the message is intended to receive the message (col. 1, lines 19-22), thus enabling the system to be configured using the information received from the selected computers from the network.

Regarding claim 8, Cheston et al. fail to teach the system of claim 7 wherein the multicast is addressed to a multicast Internet protocol (IP) address. LeMaire et al. teach the multicast being addressed to a multicast Internet protocol address (col. 4, line 43 to col. 5, line 4). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to address a multicast to a multicast IP address so that multicast packets are only delivered to those IP addresses that they are intended, thus enabling the system to be configured using the information received from the selected computers from the network.

Regarding claim 9, Cheston et al. fail to teach the system of claim 8 wherein the source IP address is 0.0.0.0. LeMaire et al. teach IP address ranging from 0.0.0.0 to 255.255.255.255. Although LeMaire et al. do not explicitly teach that the source IP address has to be 0.0.0.0, it is well known in the art that this address is reserved for a default network. When a computer system has no associated address record, its address is obviously 0.0.0.0. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to enable the source IP address to be 0.0.0.0 to ensure that the second computer recognize the first computer as not already being configured.

Regarding claim 10, Cheston et al. fail to teach the system of claim 7 wherein the at least a second computer system responds to the multicast address via a Network Configuration

Protocol (NCP) header. LeMaire et al. teach a response to the multicast address via a NCP header (figure 3; col. 4, lines 31-40). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to respond to a multicast address via a NCP header because the header specifies identity information, thus ensuring that the receiving computer will get requested information.

Regarding claim 11, Cheston et al. fail to teach the system of claim 10 wherein the NCP header further comprises a subnet address and subnet mask. Although LeMaire et al. do not explicitly teach the NCP header comprising a subnet address and a subnet mask, it is well known in the art that a subnet address and a subnet mask are a part of an IP address that share the first half of the address and has their own unique address. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ a subnet and a subnet mast so that an IP address can be shared on a network.

Regarding claim 35, Cheston et al. teach a system sending a query to a network (figure 4), but fail to teach the query being a multicast. LeMaire et al. teach sending a multicast query into a LAN (Abstract). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to query the network by sending a multicast message because multicast transmits messages to a selected group of recipients, therefore allowing only those that the message is intended to receive the message (col. 1, lines 19-22), thus enabling the system to be configured using the information received from the selected systems from the network.

Regarding claim 39, Cheston et al. fail to teach the system of claim 34 the query requests and responses are multicast over different addresses. LeMaire et al. teach requests and responses being multicasted over different addresses (col. 4, line 43 to col. 5, line 4). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to address a multicast over different addresses so that multicast packets are delivered to plurality of computers in a group, thus enabling the system to be configured using the information received from the selected systems from the network.

Claims 12, 13, 19-21 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston et al. in view of USPN 5,596,723 issued to Romohr.

Regarding claim 12, Chester et al. fail to teach the system of claim 1 wherein the query is an Address Resolution Protocol (ARP) broadcast. Romohr teaches the query being an Address Resolution Protocol (ARP) broadcast (col. 6, lines 4-37; col. 10, lines 34-45). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ an ARP broadcast because ARPs are used to find a node's address from its IP address and to assign unique addresses to nodes without IP address (col. 17, lines 25-67), thus facilitating the computer system's configuration.

Regarding claim 13, Chester et al. fail to teach the system of claim 12 wherein the ARP broadcast is associated with a router defined in the at least one configuration. Romohr teach an ARP broadcast being associated with a server in the configuration (col. 18, lines 10-18). At the

time the invention was made, it would have been obvious to one of ordinary skill in the art to associate an ARP broadcast with a router because ARPs are used to find a node's address from its IP address and to assign unique addresses to nodes without IP address (col. 17, lines 25-67), thus facilitating the computer system's configuration.

Regarding claim 19, Cheston et al. faill to teach the method of claim 17 wherein the query is at least one of multicast and a broadcast. Romohr teaches a query being a broadcast (col. 6, lines 4-37). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to query the network by sending a broadcast message because broadcast transmits messages to group of recipients that are connected to the network, thus ensuring that the query will receive its response.

Regarding claim 20, Cheston et al. fail to teach the method of claim 17 wherein the query is an Address Resolution Protocol (ARP) broadcast. Romohr teaches the query being an Address Resolution Protocol (ARP) broadcast (col. 6, lines 4-37; col. 10, lines 34-45). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ an ARP broadcast because ARPs are used to find a node's address from its IP address and to assign unique addresses to nodes without IP address (col. 17, lines 25-67), thus facilitating the computer system's configuration.

Regarding claim 21, Cheston et al. fail to teach the method of claim 17 wherein the response is at least one of multicast and a broadcast. Romohr teaches a query being a broadcast

(col. 6, lines 4-37). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to query the network by sending a broadcast message because broadcast transmits messages to group of recipients that are connected to the network, thus ensuring that the query will receive its response.

Regarding claim 36, Cheston et al. fail to teach the system of claim 34 wherein the query is an Address Resolution Protocol (ARP) broadcast. Romohr teaches the query being an Address Resolution Protocol (ARP) broadcast (col. 6, lines 4-37; col. 10, lines 34-45). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ an ARP broadcast because ARPs are used to find a node's address from its IP address and to assign unique addresses to nodes without IP address (col. 17, lines 25-67), thus facilitating the computer system's configuration.

(11) Response to Argument

Appellant argues with regards to claim 1 that Cheston is silent regarding utilizing a modified stored configuration to determine network interface configuration. The Patent Office respectfully disagrees. Col. 5, lines 25-32 of the Cheston reference teaches a stored table of terminals attached to the server (interpreted as a second computer system) that is updated when a terminal is removed. In this cased, the "updated" information is interpreted as "modified" stored configuration. Therefore, Cheston does teach this limitation.

In response to Appellant's argument in regards to claim 17 that Cheston does not teach or suggest a delay timer delay time that is based on a value of an address associated with the

network system, in a conventional computer system, when a query is sent to a network, there exists a delay timer that specifies a period of time from when the query is sent until it is received. Also, although Cheston et al. do not expressly teach a delay timer with a delay time **based on a value of an associated address**, he teaches configuring network parameter using DHCP. It is well known in the art of computer networking that for every entry in the DHCP, there exists a timer associated with each address.

Regarding claim 24, this is similar to claim 17 therefore the limitations are rejected under the same rationale.

Regarding claim 26, Appellant argues that Cheston does not teach a system comprising a multiple internet protocol configurations (MIPC) service that matches the at least one configuration associated with the first computer with a network identification associated with information received from the second computer wherein the match facilitates the first computer in configuring a network interface. However, Appellant acknowledges employing a DHCP server to obtain an IP address. Col. 4, lines 10-29 teaches a computer terminal seeking an IP address, but does not seek a new IP address when not required. In order to do this, its identification must be matched the configuration stored in the DHCP. In this case, DHCP performs the same function as MIPC in substantially the say way to reach the same result. Therefore, Cheston does teach this limitation.

Regarding claim 34, Appellant has amended to incorporate the limitation of claim 37 regarding a third computer system that determines an associated network configuration. Appellant argues that Cheston does not teach a third computer system that utilizes communications from first and second system to determine network configuration. The claim language specifically states that the third computer system determines a network configuration via communications from **at least one of** the first computer system and the second computer system, NOT from first and second computer system as argued. Figure 3 shows a network with multiple computer systems. Cheston teaches a computer system utilizing one of the multiple computer systems to determine a network configuration. Therefore, Cheston does teach the specified limitation.

The rejection of claims 7-11, 35 and 39 are sustained because they depend on rejected independent claims 1 and 34, respectively. The combination of LeMaire and Cheston does teach the limitations in the claims as specified in the rejections above.

The rejection of claims 12-13, 19-21 and 36 are sustained because they depend on rejected independent claims 1, 17 and 34, respectively. The combination of Romohr and Cheston does teach the limitations in the claims as specified in the rejections above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

ANB

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July 13, 2004

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